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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/852,987	05/10/2001	Mohan L. Sanduja	9011.1006	5857

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EXAMINER

BISSETT, MELANIE D

ART UNIT	PAPER NUMBER
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1711

DATE MAILED: 09/25/2002

5

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/852,987

Applicant(s)

SANDUJA ET AL.

Examiner

Melanie D. Bissett

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-36 is/are pending in the application.
- 4a) Of the above claim(s) 13-36 is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-12 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on ____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☒ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) ____.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). ____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Election/Restrictions

1. Restriction to one of the following inventions is required under 35 U.S.C. 121:
 - I. Claims 1-12, drawn to a graft coated substrate, classified in class 428, subclass 413+.
 - II. Claims 13-25, drawn to a process for modifying a polyethylene substrate, classified in class 427, subclass 372.2+.
 - III. Claim 36, drawn to a liquid composition, classified in class 526, subclass 72+.

The inventions are distinct, each from the other because of the following reasons:

2. Inventions II and I are related as process of making and product made. The inventions are distinct if either or both of the following can be shown: (1) that the process as claimed can be used to make other and materially different product or (2) that the product as claimed can be made by another and materially different process (MPEP § 806.05(f)). In the instant case the graft coated substrate could be made without curing the coating composition and could also be made by applying a different composition (for example, a liquid composition excluding prepolymers).
3. Inventions III and I are related as mutually exclusive species in an intermediate-final product relationship. Distinctness is proven for claims in this relationship if the intermediate product is useful to make other than the final product (MPEP § 806.04(b), 3rd paragraph), and the species are patentably distinct (MPEP § 806.04(h)). In the instant case, the intermediate product is deemed to be useful as a coating composition

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for a different polyolefin substrate and the inventions are deemed patentably distinct since there is nothing on this record to show them to be obvious variants. Should applicant traverse on the ground that the species are not patentably distinct, applicant should submit evidence or identify such evidence now of record showing the species to be obvious variants or clearly admit on the record that this is the case. In either instance, if the examiner finds one of the inventions anticipated by the prior art, the evidence or admission may be used in a rejection under 35 U.S.C. 103(a) of the other invention.

4. Inventions III and II are related as product and process of use. The inventions can be shown to be distinct if either or both of the following can be shown: (1) the process for using the product as claimed can be practiced with another materially different product or (2) the product as claimed can be used in a materially different process of using that product (MPEP § 806.05(h)). In the instant case the liquid composition could be used in a process including applying the composition to a different polyolefin substrate.

5. Because these inventions are distinct for the reasons given above and have acquired a separate status in the art as shown by their different classification, restriction for examination purposes as indicated is proper.

6. During a telephone conversation with Paul Higgins on 9/11/02 a provisional election was made with traverse to prosecute the invention of Group I, claims 1-12. Affirmation of this election must be made by applicant in replying to this Office action.

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Claims 13-36 are withdrawn from further consideration by the examiner, 37

CFR 1.142(b), as being drawn to a non-elected invention.

7. Applicant is reminded that upon the cancellation of claims to a non-elected invention, the inventorship must be amended in compliance with 37 CFR 1.48(b) if one or more of the currently named inventors is no longer an inventor of at least one claim remaining in the application. Any amendment of inventorship must be accompanied by a request under 37 CFR 1.48(b) and by the fee required under 37 CFR 1.17(i).

Specification

8. A substitute specification including the claims is required pursuant to 37 CFR 1.125(a) because the appearance of additional text (shadowed text such as from copying) renders the intended text difficult to read.

A substitute specification filed under 37 CFR 1.125(a) must only contain subject matter from the original specification and any previously entered amendment under 37 CFR 1.121. If the substitute specification contains additional subject matter not of record, the substitute specification must be filed under 37 CFR 1.125(b) and must be accompanied by: 1) a statement that the substitute specification contains no new matter; and 2) a marked-up copy showing the amendments to be made via the substitute specification relative to the specification at the time the substitute specification is filed.

Claim Rejections - 35 USC § 102

9. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in-

(1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effect under this subsection of a national application published under section 122(b) only if the international application designating the United States was published under Article 21(2)(a) of such treaty in the English language; or

(2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that a patent shall not be deemed filed in the United States for the purposes of this subsection based on the filing of an international application filed under the treaty defined in section 351(a).

10. Claims 1-2, 6-9, and 10-11 are rejected under 35 U.S.C. 102(b) as being anticipated by Wyman et al.

11. Wyman discloses a polymer film coated with polysilicone coating, where the coating is grafted onto the polymer film (abstract). The coatings have surface tensions well in excess of 60 dynes/cm (col. 2 lines 30-36). Low-density polyethylene is exemplified as a polymer film (example 1). Since the reference teaches the coating of polymer films, it is the examiner's position that the reference suggests the formation of curved or planar sheets.

12. Regarding claims 8-9, it is noted that the claims only further limit the pipe articles in claim 7. Since pipe articles have not been chosen in Wyman's invention, the further limitation of the pipe articles bears no patentable weight, and Wyman's reference anticipates the claims.

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13. Wyman discloses a graft-coated substrate using materials preferred by the applicant. Since the coated substrate of Wyman's invention would be similar in structure to coated substrates of the applicant's claimed invention, it is the examiner's position that Wyman's coated substrate would inherently possess the applicant's claimed heat resistance properties.

14. Claims 1-3 and 10-12 are rejected under 35 U.S.C. 102(b) as being anticipated by Spenadel et al.

15. Spenadel discloses a process for forming automotive body components by crosslinking a surface coating onto a substrate (abstract), where the substrate polymers include polyethylene homopolymers and copolymers (col. 3 line 47-col. 4 line 27) and the surface coatings include pigmented acrylic, polyurethane, and epoxy coatings which graft onto the substrate (col. 5 lines 1-14). Substrates including low-density polyethylene are exemplified (example 1).

16. Spenadel discloses a graft-coated substrate using materials preferred by the applicant. Since the coated substrate of Spenadel's invention would be similar in structure to coated substrates of the applicant's claimed invention, it is the examiner's position that Spenadel's coated substrate would inherently possess the applicant's claimed heat resistance and surface energy properties.

17. Claims 1 and 6-9 are rejected under 35 U.S.C. 102(b) as being anticipated by Fydeler et al.

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18. Fydelor discloses a surgical device comprising a polyolefin grafted with hydrophilic thermoplastic copolymer at the surface (abstract). Examples show acrylic polymers grafted onto a high or low density polyethylene substrate to form coated films (examples 1-2). The materials are used to form straight or curved tubes, as heart valves and patches, etc. (col. 2 lines 16-37). One skilled in the art would clearly envision the formation of single wall or multi-layered pipes from the mention of tubes and tube coverings.

19. Claims 1 and 4-9 are rejected under 35 U.S.C. 102(b) as being anticipated by Nguyen et al. as evidenced by CRC Press.

20. Nguyen discloses the treatment of ultrahigh molecular weight, high strength polyolefins by coating the surface with a monomer solution and grafting the coating onto the polyolefin (abstract). The preferred polyolefin is polyethylene having a molecular weight of 150,000-5,000,000 (col. 2 lines 16-62). Since films and tapes are mentioned as materials of the invention (col. 1 lines 11-22), it is the examiner's position that the reference suggests the formation of curved or planar sheets. Although Nguyen does not mention the density of the polyethylenes used, CRC Press teaches that ultrahigh molecular weight polyethylene conventionally has a density of 0.93-0.94 g/cm³. Thus, the materials of Nguyen's invention inherently possess the applicant's claimed density.

21. Regarding claims 8-9, it is noted that the claims only further limit the pipe articles in claim 7. Since pipe articles have not been chosen in Nguyen's invention, the further

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limitation of the pipe articles bears no patentable weight, and Nguyen's reference anticipates the claims.

22. Claims 1-2 and 7-12 are rejected under 35 U.S.C. 102(e) as being anticipated by Wang et al.

23. Wang discloses a method of coating a substrate with a composition which is grafted onto the substrate (abstract) to form catheters or tubes (col. 1 lines 9-20). Preferred substrates include polyethylene (col. 4 lines 37-44), and preferred coatings include polyurethanes and epoxy materials (col. 12 lines 16-27). Since the reference teaches the materials for tubing, it is the examiner's position that one of skill in the art would clearly envision the formation of single wall straight pipes.

24. Wang discloses a graft coated substrate using materials preferred by the applicant. The coated substrates are noted to have a different surface energy from the substrate (col. 5 lines 33-51), where the coatings are more hydrophilic than the substrate and would thus increase wetting of aqueous solutions. Since the coated substrate of Wang's invention would be similar in structure to coated substrates of the applicant's claimed invention, it is the examiner's position that Wang's coated substrate would inherently possess the applicant's claimed heat resistance and surface energy properties.

Claim Rejections - 35 USC § 103

25. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

26. Claim 12 is rejected under 35 U.S.C. 103(a) as being unpatentable over Wyman et al.

27. Wyman applies as above to show coatings having surface tensions of at least 60 dynes/cm. Although the reference indicates surface tensions well in excess of 60 dynes/cm, the reference does not specifically show coatings having surface tensions of at least 80 dynes/cm. Since Wyman teaches that the increase in carboxylic acids present increases surface tension and improves wetting and adhesion characteristics, it is the examiner's position that it would have been prima facie obvious to vary the amount of carboxylic acid present in the coating to vary surface tension, thus optimizing wetting and adhesion properties of the coating.

28. Claims 10-12 are rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Nguyen et al. as evidenced by Wyman et al.

29. It is the examiner's position that, because the reference discloses all the limitations of the claims except the heat resistance and surface energy properties of the coated substrate, the examiner cannot determine whether or not the reference

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inherently possesses properties which anticipate or render the claimed invention obvious. Therefore, it is appropriate for the examiner to make a rejection under both the applicable section of 35 USC 102 and 35 USC 103 such that the burden is placed upon the applicant to provide clear evidence that the respective compositions do in fact differ.

In re Fitzgerald et al., 205 USPQ 594.

30. Nguyen teaches modifying the surface of polyethylene with a coating including unsaturated organic acids (col. 4 lines 5-11). Wyman shows that the modification of a hydrophobic substrate with acidic monomers yields a higher surface tension (col. 2 lines 20-51). Since Nguyen teaches the modification of polyethylene with acidic monomers, it is the examiner's position that a coated substrate by Nguyen's invention would inherently possess the applicant's claimed surface energy properties. Furthermore, because of the similarity of structure in Nguyen's invention and that of the applicant's claimed invention, it is the examiner's position that the coated substrate of Nguyen's invention would also inherently possess the applicant's claimed heat resistance properties.

31. Regardless, since Wyman shows the variation of surface tension with increased amounts of acidic monomer, it is the examiner's position that it would have been prima facie obvious to control the amount of acidic monomer on Nguyen's substrate to optimize the surface energy of the substrate and improve wetting and adhesion.

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32. Claims 10-12 are rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Fydeler et al. as evidenced by Wyman et al.

33. It is the examiner's position that, because the reference discloses all the limitations of the claims except the heat resistance and surface energy properties of the coated substrate, the examiner cannot determine whether or not the reference inherently possesses properties which anticipate or render the claimed invention obvious. Therefore, it is appropriate for the examiner to make a rejection under both the applicable section of 35 USC 102 and 35 USC 103 such that the burden is placed upon the applicant to provide clear evidence that the respective compositions do in fact differ.

In re Fitzgerald et al., 205 USPQ 594.

34. Fydeler teaches modifying the surface of polyethylene with a coating including unsaturated organic acids (examples). Wyman shows that the modification of a hydrophobic substrate with acidic monomers yields a higher surface tension (col. 2 lines 20-51). Since Fydeler teaches the modification of polyethylene with acidic monomers, it is the examiner's position that a coated substrate by Fydeler's invention would inherently possess the applicant's claimed surface energy properties. Furthermore, because of the similarity of structure in Fydeler's invention and that of the applicant's claimed invention, it is the examiner's position that the coated substrate of Fydeler's invention would also inherently possess the applicant's claimed heat resistance properties.

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35. Regardless, since Wyman shows the variation of surface tension with increased amounts of acidic monomer, it is the examiner's position that it would have been prima facie obvious to control the amount of acidic monomer on Fydelor's substrate to optimize the surface energy of the substrate and improve wetting and adhesion.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Melanie D. Bissett whose telephone number is (703) 308-6539. The examiner can normally be reached on M-F 8-4:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, James Seidleck can be reached on (703) 308-2462. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 872-9310 for regular communications and (703) 872-9311 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0661.

mdb
September 19, 2002



James J. Seidleck
Supervisory Patent Examiner
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